

CLAIMS

1. A drive device for writing data transmitted by a host device onto a memory card in accordance with a command issued by the host device, comprising:

5 a receiving unit operable to receive a plurality of commands issued by the host device; and

a writing unit operable, if a write end address of one of the received commands is consecutive with a write start address of a following command, to perform the data writing 10 to the memory card by the consecutive commands in a single process.

2. The drive device of claim 1, wherein

15 the process involves processing to sequentially write data received from the host device to the memory card being repeated until a STOP instruction is given, and

the drive device further comprises:

an analysis unit operable to decode the write-start address and a sector number of each command, the sector number 20 being the number of sectors of data for writing with the command; and

an instruction unit operable to give the STOP instruction at a point when a written sector number reaches $s + t$, where 25 s is the sector number of the one command and t is the sector number of the following command.

3. The drive device of claim 2, wherein

the process is activated when the analysis unit decodes a write-start address A and the sector number s from the one 5 command, and involves the data writing being started from the write-start address A ,

the analysis unit analyzes the following command until the written sector number reaches s , and

the instruction unit gives the STOP instruction when the 10 written sector number reaches $s + t$, if a write-start address B of the following command is consecutive with a write-end address $A + s$ of the one command.

4. The drive device of claim 3, wherein

15 the analysis unit judges whether a prohibit flag is appended to the following command, and

the instruction unit (i) gives the STOP instruction at a point when the written sector number reaches s if the prohibit flag is appended to the following command, and (ii) gives the 20 STOP instruction at the point when the written sector number reaches $s + t$ if the prohibit flag is not appended to the following command and the write-start address B of the following command is consecutive with the write-end address $A + s$ of the one command.

5. The drive device of claim 3, wherein

the analysis unit judges whether a prohibit flag is appended to the one command, and

the instruction unit (i) gives the STOP instruction at 5 a point when the written sector number reaches s , if the prohibit flag is appended to the one command, and (ii) gives the STOP instruction at the point when the written sector number reaches $s + t$, if the prohibit flag is not appended to the one command and the write-start address B of the following command 10 is consecutive with the write-end address $A + s$ of the previous command.

6. The drive device in one of claims 2 to 4, wherein

a wait flag is appended to a command received from the 15 host device, and

if the command with the wait flag is received and a following command has yet to be received, the analysis and instruction units wait for the following command to be received.

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7. The drive device in one of claims 1 to 6, wherein the host device transmits commands with a tag attached thereto to the drive device sequentially, the tags showing an order of the commands.

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8. The drive device in one of claims 3 to 5 further comprising:

a storage unit operable to store commands received from the host device; and

a rearranging unit operable to rearrange the stored

5 commands in order of the write-start addresses, wherein

the analysis unit performs the analysis in the rearranged order of the commands.

9. The drive device of claim 2, wherein

10 the analysis unit judges whether $s + t$ is an integer multiple of the number of sectors in an erasable block of the memory card, and

if judged in the negative, the instruction unit continues the process by not giving the STOP instruction even if the 15 written sector number reaches $s + t$, and waits for a further command to be received.

10. A computer program for causing a computer to execute

processing to write data transmitted by a host device onto a

20 memory card in accordance with a command issued by the host device, the computer program causing the computer to perform the steps of:

receiving a plurality of commands issued by the host device; and

25 if a write end address of one of the received commands

is consecutive with a write start address of a following command, performing the data writing to the memory card by the consecutive commands in a single process.

5 11. The computer program of claim 10, wherein
the process involves processing to sequentially write
data received from the host device to the memory card being
repeated until a STOP instruction is given, and
the computer program causes the computer to perform the
10 further steps of:

decoding the write-start address and a sector number of
each command, the sector number being the number of sectors
of data for writing with the command; and

giving the STOP instruction at a point when a written
15 sector number reaches $s + t$, where s is the sector number of
the one command and t is the sector number of the following
command.

12. The drive device of claim 11, wherein
20 the process is activated when a write-start address A
and the sector number s from the one command is decoded, and
involves the data writing being started from the write-start
address A,

the following command is analyzed until the written
25 sector number reaches s , and

the STOP instruction is given when the written sector number reaches $s + t$, if a write-start address B of the following command is consecutive with a write-end address $A + s$ of the one command.